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78
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/978,528	10/17/2001	Andres Bryant	BU9-99-055	5054

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EXAMINER

SEFER, AHMED N

ART UNIT	PAPER NUMBER
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2826

DATE MAILED: 03/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application

09/978,528

Applicant(s)

BRYANT ET AL.

Examiner

A. Sefer

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 1-22 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32 and 33 is/are allowed.
- 6) ☒ Claim(s) 23-25 and 27-29 is/are rejected.
- 7) ☒ Claim(s) 26, 30 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. The amendment filed on 1/16/03 has been entered and new claims 28-33 have been added.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3. Claims 23-25 and 27-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Deleonibus US Patent No. 6,091,076.

Deleonibus discloses in fig. 2 a semiconductor layer formed on an insulating layer 44; a gate conductor 20 formed on the semiconductor layer; spacers 24 formed on sidewalls of the gate conductor and on the semiconductor layer; extension regions 8, 10 extending further under the spacers than diffusion regions 4, 6 (as in claim 28) arranged in the semiconductor layer on both sides of the gate conductor and extending at least under the spacers; diffusion regions 4, 6 formed in the semiconductor material adjacent to the extension regions such that a portion of at least one of the extensions regions is

Art Unit: 2826

exposed at a surface of the semiconductor layer; a metal layer 12, 14 contacting the diffusion region (as in claim 25) formed at least in the exposed portion of the extension region.

As to claim 24, Deleonibus discloses extension regions lower doped than the diffusion regions.

As to claim 27, Deleonibus discloses extension region exposed on both sides of the gate conductor and the metal layer formed in both the exposed portions of the extension regions.

As to claim 29, Deleonibus discloses said metal layer and said exposed portion of the extension region form a schottky diode.

4. Claims 23-25 and 27-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamaguchi et al. (EP 480635).

Yamaguchi et al disclose in figs. 5 and 6 a semiconductor layer formed on an insulating layer 12; a gate conductor 20 formed on the semiconductor layer; spacers 25/26 formed on sidewalls of the gate conductor and on the semiconductor layer; extension regions 15, 16 extending further under the spacers than diffusion regions 17, 18 (as in claim 28) arranged in the semiconductor layer on both sides of the gate conductor and extending at least under the spacers; diffusion regions 17, 18 formed in the semiconductor material adjacent to the extension regions such that a portion of at least one of the extensions regions is exposed at a surface of the semiconductor layer; a metal layer 27 contacting the diffusion region (as in claim 25) formed at least in the exposed portion of the extension region.

Art Unit: 2826

As to claim 24, Yamaguchi et al disclose extension regions lower doped than the diffusion regions.

As to claim 27, Yamaguchi et al disclose extension region exposed on both sides of the gate conductor and the metal layer formed in both the exposed portions of the extension regions.

As to claim 29, Yamaguchi et al disclose said metal layer and said exposed portion of the extension region form a schottky diode.


Allowable Subject Matter

5. Claims 32 and 33 are allowed.
6. Claims 26, 30 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (703) 605-1227.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (703) 308-6601.

ANS
March 24, 2003


NATHAN J. FLYNN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800